



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,576	04/20/2006	Yoon-Seob Eom	P0771	4122
34610 7590 03/24/2010 KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200				
EXAMINER				
ALI, MOHAMMAD M				
ART UNIT		PAPER NUMBER		
3744				
MAIL DATE		DELIVERY MODE		
03/24/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/576,576

**Applicant(s)**

EOM ET AL.

**Examiner**

MOHAMMAD M. ALI

**Art Unit**

3744

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 43-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 43-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/22)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copp (US 3,309,889) in view of Thomaschew (DE2649016 A). Copp discloses a window type air conditioner comprising

A case of which one side (38) is positioned at an outdoor side and another side (28) is positioned at an indoor side; an axial fan (62) mounted in the case, for blowing air in a radius direction thereof; an outdoor heat exchanger (70) for heat-exchanging outdoor air blown by the axial fan; and a shroud (64) having the outdoor heat exchanger therein, for guiding the air blown by the axial fan (62), wherein an inclination surface is formed at an edge (See the inclination surface two ends of the fan blades of fan 62) in

order to smoothly flow air introduced in a radius direction. See Fig 2, column 1, line 63 to column 2, line 57. Copp discloses the invention substantially as claimed as stated above except a first surface with polygonal shape, and plurality of first inclination surface with triangular shape; plurality of second inclination surfaces.

Tomaschew teaches the use of first surface with polygonal shape and a triangular shape with an edge of the polygonal surface (See Fig. 3b, the large triangular shape surfaces originate from the edge of the polygonal shape); a plurality of second inclination surfaces (see the near the bottom portion of Fig. 3b, rectangular portions). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the fan housing of air conditioning system of Copp in view of Thomaschew such that a triangular surface is discloses with the first edges of the first surface the other surfaces are discloses with the other edges of the first surface could be provided in order to have a stronger structural feature and efficient air flow guide.

Regarding claim 43, the above combined disclosure of Copp and Thomaschew disclose the limitations of claims 1 and 34.

Regarding claim 44, Thomaschew discloses that the first number of edges and the second number of edges are disposed in an alternating arrangement relative to the first surface of the shroud. See Fig. 3b of Thomaschew

Regarding claim 45, orifice is mouth of the shroud in which the fan (62) and fan motor (66) is disposed.

Regarding claim 46, Thomaschew discloses points (10) forming corners of the fan shroud at which four sides of first surfaces meet together. (See Fig. 3b).

Regarding claim 47, Tomaschew discloses that first inclination surfaces with the sides as disclosed in claim above, the first inclination surfaces are formed at chamfered corner as shown in Fig. 3b.

Regarding claim 48, Thomaschew discloses polygonal shape surface having eight sides as shown in Fig. 3b except octagonal shape. Having a specific shape is discovering an optimum value.

It is further mentioned that it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Regarding claim 49, Tomaschew discloses that first inclination surfaces are respectively formed at the four corners of the shroud. See Fig. 3b

Regarding claim 50, Tomaschew discloses that the second inclination surfaces are substantially trapezoidal shape. See Fig. 3b.

Regarding claim 51, Tomaschew discloses that shroud further includes a lateral surfaces (See Fig. 3b, the outer most surfaces includes lateral surfaces); the second inclination surfaces extend between the first surface and the lateral surface.

### ***Response to Arguments***

Applicant's arguments with respect to claims 43-51 have been considered but are moot in view of the new ground(s) of rejection as explained above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MOHAMMAD M. ALI** whose telephone number is (571)272-4806. The examiner can normally be reached on maxiflex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4808. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mohammad M Ali/  
Primary Examiner, Art Unit 3744